(b) and (c) (i) Under National Action Plan on Climate Change (NAPCC) of the Government, specific action plans for the regional climate change impacts over India are to be launched in which these specific aspects are being considered for evolving climate change impact scenarios.

(ii) National Disaster Management Authority (NDMA) has currently undertaken national and regional level consultations for formulating Management of Guidelines for Urban Floods including the climate change impacts over urban environments. Formulation of guidelines for the Management of Urban Floods by NDMA will enable development of suitable national and state level action plans.

Expansion of the National Centre for Ocean Information Service

1755. SHRI RUDRA NARAYAN PANY:
SHRI B.J. PANDA:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether it is a fact that the Indian National Centre for Ocean Information Service (INCOIS) is expanding its arms in providing upto date information on predicting storms, optimizing fishing time, earthquakes, tsunami *etc.*;

(b) if so, the details thereof;

(c) the details of centres that have been set up on the Orissa coast to pre-warm both coastal population and the fishermen about the impending dangers to the sea; and

(d) the details of other countries which are being serviced by the above unit?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) Yes, Sir.

(b) The Tsunami Early Warning Centre set up at INCOIS Hyderabad, is being expanded to provide information on storm surges also, Currently, INCOIS provides information on Potential Fishing Zone (PFZ), and Ocean State advisories and Tsunami Early warnings. The PFZ advisories are being provided thrice a week during the non-ban period for the coastal fisherman community using a wide range of media whereas the tsunami advisories are issued on 24 × 7 basis.

(c) Towards providing the advisory services, a set of 10 Electronic Display Boards have been established along the coast of Orissa one each at Bahabalpur, Chudamani, Kharanasi, Talachuan, Paradeep, Astaranga, Penthakotta, Arjipalli, New Golabandha and Balaramgadi.

(d) The INCOIS has been recognized as Regional Tsunami Watch Provider (RTWP) for the Indian Ocean region. The INCOIS has signed Memorandum of Understanding with the Asian Disaster Preparedness Centre (ADPC) and in the process of signing with other countries such as Maldives, Mauritius and Thailand for providing Tsunami advisories.

Six-in-house projects of National Institute of Ocean Technology

1756. SHRI VIJAY JAWAHARLAL DARDA:
SHRIMATI SYEDA ANWARA TAIMUR:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the six in house projects of National Institute of Ocean Technology, relating to desalination Technology Power generation, from wave energy, lobster fattening Technology and marine instruments, *etc.* have been commercialized;

(b) if so, how much expenditure has been incurred on each project; and

(c) the gestation period to have earnings from their commercialization?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) No, Sir. National Institute of Ocean Technology has carried out technology development and demonstration of these projects. Efforts are being made to bring private partnership in this endevour.

(b) The expenditures incurred by government on various projects like Ocean Energy, Marine Instruments, Deep Sea Technology, Coastal and Environments Engineering, and Ocean Science and Technology for Islands are Rs. 5.21 Crore, Rs. 13.10 Crore, Rs. 20.21 crore, Rs. 29.65 crore and Rs. 8.67 crore respectively.

(c) Does not arise.

Ocean Thermal Energy Conversion Project

1757. SHRIMATI SYEDA ANWARA TAIMUR:
SHRI VIJAY JAWAHARLAL DARDA:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the National Institute of Ocean Technology's Rs. 35-crore Ocean Thermal Energy Conversion started in 1998, whose cost was further escalated to Rs. 83.49 crores in September 2004, has not been completed so far during the last ten years;

(b) if so, the revised schedule for its completion;

(c) how much expenditure has been incurred so far; and

(d) whether the progress made so far is in commensurate with spending of Rs. 60.82 crores?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) The revised cost of Rs. 83.49 crores for 1 MW Ocean Thermal Energy Conversion (OTEC) Technology Demonstration project was not approved and recommended for winding up. The project was accordingly discontinued.

(b) Does not arise.

(c) and (d) An expenditure of Rs. 61.13 crores was incurred for this project with the following significant milestones commensurating the expenditure:—

- Design and Development of 1 MW Ocean Thermal Energy Conversion (OTEC) Technology Demonstration Plant
- Four stage axial flow low pressure ratio (1:4) and 1 MW Ammonia Turbine developed for the first time in India